

Claims:

We claim:

1. A vacuum lid comprising:

a top surface which is convex;

5 a plurality of raised members extending upwardly from the convex top surface; the raised members being of varying height in order to define a flat platform adjacent to the top surface; and

said to surface associated with a peripheral edge adapted to engage a container.

10 2. The reusable vacuum lid of claim 1 wherein:

the top surface has a center portion, and wherein the height of the raised members adjacent to the center portion is less than the height of the raised members adjacent to the peripheral edge.

15 3. The vacuum lid of claim 1 wherein:

one of said raised members houses a vacuum valve.

4. The vacuum lid of claim 3 wherein:

said one raised members that houses said vacuum valve is removable.

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5. The vacuum lid of claim 1 wherein:

said raised members are hollow.

6. The vacuum lid of claim 1 wherein:

5 said raised members are rounded.

7. A vacuum lid comprising:

a top surface which is convex;

a plurality of raised members extending upwardly from the convex top surface;

10 the raised members being of varying height in order to define a flat platform

adjacent to the top surface;

a peripheral edge adapted to engage a container;

the top surface has a center portion, and wherein the height of the raised

members adjacent to the center portion is less than the height of the raised members

15 adjacent to the peripheral edge; and

one of said raised members houses a vacuum valve.

8. The vacuum lid of claim 7 wherein:

said one raised members that houses said vacuum valve is removable.

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9. The vacuum lid of claim 8 wherein:

said raised members are hollow.

10. The vacuum lid of claim 8 wherein:

5 said raised members are rounded.

11. The vacuum lid of claim 1 wherein:

at least some of the raised members have side walls of varying heights.

10 12. The vacuum lid of claim 8 wherein:

at least some of the raised members have side walls of varying heights.

13. The vacuum lid of claim 1 wherein said raised members are cylindrical in shape

and at least some of the raised members have a side wall that varies in height.

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14. The vacuum lid of claim 8 wherein said raised members are cylindrical in shape

and at least some of the raised members have a side wall that varies in height.

15. The vacuum lid of claim 1 wherein:

20 said top surface has a center portion and the height of said raised members

increases as the distance that the raised members radiate out from the center portion.

16. The vacuum lid of claim 8 wherein:

said top surface has a center portion and the height of said raised members

5 increases as the distance that the raised members radiate out from the center portion.

17. A vacuum valve for a lid that is adapted for covering a container, comprising:

a raised member movably connected to a lid;

a first access port provide thorough said raised member;

10 a second container access port provide through said lid;

a valve membrane having a first position that seals said second container access port and a second position that opens said container access port;

wherein said raised member houses said valve membrane; and

wherein said raised member has an extension that can engage said valve member

15 as said raised member is rotated relative to said lid in order to dislodge said first position in order to break the seal between the valve member and said second container access port.

18. The vacuum valve of claim 17 wherein:

20 said valve membrane has an upstanding member that is engagable by said

extension in order to dislodge said valve membrane.

19. The vacuum valve of claim 17 wherein:

said valve membrane a plurality of upstanding tabs extending therefrom.

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20. The vacuum valve of claim 17 wherein:

said valve membrane is a ring of upstanding tabs extending therefrom.

21. The vacuum valve of claim 17 wherein said lid includes:

10 a top surface which is convex;

a plurality of additional raised members extending upwardly from the convex top
surface;

the additional raised members being of varying height in order to define a flat
platform adjacent to the top surface; and

15 said to surface associated with a peripheral edge adapted to engage a container.

22. The vacuum valve of claim 17 wherein said lid includes:

a top surface which is convex;

a plurality of additional raised members extending upwardly from the convex top

20 surface;

the additional raised members being of varying height in order to define a flat platform adjacent to the top surface;

a peripheral edge adapted to engage a container; and

the top surface has a center portion, and wherein the height of the additional
5 raised members adjacent to the center portion is less than the height of the additional raised members adjacent to the peripheral edge.

23. A vacuum valve for a lid that is adapted for covering a container, comprising:

a housing member movably connected to a lid;

10 a first access port provide thorough said housing member;

a second container access port provide through said lid;

a valve membrane having a first position that seals said second container access port and a second position that opens said container access port;

wherein said housing member houses said valve membrane; and

15 wherein said housing member has an extension that can engage said valve member as said housing member is rotated relative to said lid in order to dislodge said first position in order to break the seal between the valve member and said second container access port.

20 24. The vacuum valve of claim 23 wherein:

said valve membrane has an upstanding member that is engagable by said extension in order to dislodge said valve membrane.

25. The vacuum valve of claim 23 wherein:

5 said valve membrane a plurality of upstanding tabs extending therefrom.

26. The vacuum valve of claim 23 wherein:

said valve membrane is a ring of upstanding tabs extending therefrom.

10 27. The vacuum valve of claim 23 wherein said lid includes:

a top surface which is convex;

a plurality of raised members extending upwardly from the convex top surface;

the raised members being of varying height in order to define a flat platform

adjacent to the top surface; and

15 said to surface associated with a peripheral edge adapted to engage a container.

28. The vacuum valve of claim 17 wherein said lid includes:

a top surface which is convex;

a plurality of raised members extending upwardly from the convex top surface;

20 the additional members being of varying height in order to define a flat platform

adjacent to the top surface;

a peripheral edge adapted to engage a container; and

the top surface has a center portion, and wherein the height of the raised members adjacent to the center portion is less than the height of the raised members

5 adjacent to the peripheral edge.

29. The vacuum valve of claim 17 wherein:

said valve membrane includes a valve stem and a valve stopper extending from said valve stem; and

10 said valve stem is disposed in said second container access port with said valve stopper retaining said valve stem in said second container access port.

30. The vacuum valve of claim 23 wherein:

said valve membrane includes a valve stem and a valve stopper extending from said valve stem; and

15 said valve stem is disposed in said second container access port with said valve stopper retaining said valve stem in said second container access port.

31. A reusable vacuum lid, comprising:

20 a top surface including an access aperture;

a container valve connected with the top surface and proximate to the access aperture; and

a removable raised member connected with the top surface, wherein the removable raised member covers the access aperture.

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32. The reusable vacuum lid of claim 31, wherein:

the container valve includes a membrane; and

the membrane is coupled with a membrane stopper.

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33. The reusable vacuum lid of claim 32, wherein:

the membrane is coupled with a membrane stem.

34. The reusable vacuum lid of claim 33, wherein the membrane is cup shaped.

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35. The reusable vacuum lid of claim 33, wherein the membrane is disk shaped.

36. The reusable vacuum lid of claim 33, including:

a bottom surface;

wherein the access aperture has a top end proximate to the top surface and a

20 bottom end proximate to the bottom surface;

wherein the membrane stem includes a first end and a second end; and
wherein the membrane stem passes through the access aperture such that the first
end of the membrane stem is proximate to the top end of the access aperture and the
second end of the membrane stem is proximate to the bottom end of the access aperture.

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37. The reusable vacuum lid of claim 36, wherein:

the membrane is connected with the first end of the membrane stem and the
membrane stopper is connected with the second end of the membrane stem.

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38. The reusable vacuum lid of claim 31, wherein:

the removable raised member includes a vacuum access port.

39. The reusable vacuum lid of claim 31, wherein:

the lid includes a lid perimeter.

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40. The reusable vacuum lid of claim 39, wherein:

the upper surface of the removable raised member and the lid perimeter form a
container support surface.

20 41. The reusable vacuum lid of claim 31, wherein:

the removable raised member is generally disk shaped.

42. The reusable vacuum lid of claim 31, including:

a plurality of raised fixed members of varying heights.

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43. The reusable vacuum lid of claim 42, wherein:

the upper surface of the raised member and the upper surface of the removable raised members form a container support surface.

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44. The reusable vacuum lid of claim 42, wherein:

the raised fixed members are generally disk shaped.

45. The reusable vacuum lid of claim 42, wherein:

the raised members end include a ridge.

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46. A reusable vacuum lid, comprising:

a top surface including an access aperture;

a plurality of raised members of varying heights, each with an upper surface extending from the top surface;

20 wherein one of the plurality of raised members of varying heights is a removable

raised member extending from the top surface;

the removable raised member includes a vacuum port; and

a container valve connected with the top surface and proximate to the access

aperture, wherein the removable raised member covers the container valve and the

5 vacuum port provides access to the container valve through the removable raised
member.

47. The reusable vacuum lid of claim 46, wherein:

the container valve includes a membrane and the membrane includes a plurality of

10 membrane wings separated by membrane grooves.

48. The vacuum lid of claim 1, further including:

a container to which the lid can be engaged.

15 49. The vacuum lid of claim 7 further including:

a container to which the lid can be engaged.

50. The vacuum lid of claim 12 further including:

a container to which the lid can be engaged.